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COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS

Sub-Committee of Experts on the
Transport of Dangerous Goods

REPORT OF THE SUB-COMMITTEE OF EXPERTS ON ITS SIXTEENTH SESSION

(Geneva, 5-14 July 1999)

Addendum 2

Annex 2

Draft amendments to the Model Regulations annexed to the eleventh revised edition of the United Nations Recommendations on the Transport of Dangerous Goods (Refer to ST/SG/AC.10/1/Rev.11)

GE.99- 22849

DRAFT AMENDMENTS TO THE MODEL REGULATIONS ANNEXED TO THE ELEVENTH REVISED EDITION OF THE UNITED NATIONS RECOMMENDATIONS ON THE TRANSPORT OF DANGEROUS GOODS
(Refer to ST/SG/AC.10/1/Rev.11)

Chapter 1.2

1.2.1 Add the following definition:

"Aerosols or aerosols dispensers are non-refillable receptacles meeting the requirements of 6.2.2, made of metal, glass or plastics and containing a gas compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state."

Chapter 2.0

2.0.1.3 Amend to read as follows:

"2.0.1.3 For packing purposes, substances of all classes, other than Classes 1, 2, and 7, divisions 5.2 and 6.2 and the self-reactive substances of division 4.1, are assigned to three packing groups in accordance with the degree of danger presented by the substance. The packing groups have the following meanings:

Packing Group I: Substances presenting high danger,
Packing Group II: Substances presenting medium danger, and
Packing Group III: Substances presenting low danger,

The packing group to which a substance is assigned is indicated in the Dangerous Goods List in Chapter 3.2."

Chapter 2.1

2.1.3.1.2 (d) Delete.

2.2.1.1 Add the following Note:

"***Note**: Carbonated beverages are not subject to these Regulations.*"

2.2.2.1 Under the Note, insert "(GAS CARTRIDGES)" after "UN 2037 RECEPTACLES, SMALL, CONTAINING GAS".

Chapter 2.4

Introductory Note 3 Delete.

2.4.2.3.2.3 Add the following entries to read:

Self-reactive Substance	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Remarks
2-DIAZO-1-NAPHTHOL-4-SULPHONIC ACID ESTER	100%	OP7			3226	
2-DIAZO-1-NAPHTHOL-5-SULPHONIC ACID ESTER	100%	OP7			3226	
2,5-DIETHOXY-4-(4-MORPHOLINYL)-BENZENEDIAZONIUM SULPHATE	100%	OP7			3226	
4-(DIMETHYLAMINO)-BENZENEDIAZONIUM, TRICHLOROZINCATE (-1)	100%	OP8			3228	
2,5-DIBUTOXY-4-(4-MORPHOLINYL)-BENZENEDIAZONIUM, TETRACHLOROZINCATE (2:1)	100%	OP8			3228	

Chapter 2.6

2.6.3.3 Delete "and clinical or (bio)medical waste" in the title.

2.6.3.3.3 Delete.

Chapter 2.8

2.8.1 Delete "they may also cause other hazards".

Chapter 3.1

3.1.2.6 Add a new paragraph 3.1.2.6 to read as follows:

"3.1.2.6 Except for self-reactive substances and organic peroxides and unless it is already included in capital letters in the name indicated in the Dangerous Goods List, the word STABILIZED shall be added as part of the proper shipping name of a substance which without stabilization would be forbidden from transport in accordance with 1.1.3 due to it being liable to dangerously react under conditions normally encountered in transport."
(e.g. TOXIC LIQUID, ORGANIC, N.O.S., STABILIZED)

3.1.2.7 Add a new paragraph to read as follows:

"3.1.2.7 Hydrates may be included under the proper shipping name for the anhydrous substance."

Renumber consequently following paragraphs and sub-paragraphs.

Chapter 3.2

3.2.1 Under the explanation of column (2), delete "of organic substances" in the last sentence.

DANGEROUS GOODS LIST

UN 0015 Delete "8" in column (4).

UN 0016 Delete "8" in column (4).

UN 0303 Delete "8" in column (4).

UN 0331 Add "(AGENT, BLASTING, TYPE B)" in column (2). (English text only)

UN 0332 Add "(AGENT, BLASTING, TYPE B)" in column (2). (English text only)

UN 1062 Amend the name in column (2) to read as follows:

"METHYL BROMIDE with not more than 2% chloropicrin"

UN 1381 Insert "TP31" in column (11).

UN 1422 Insert "TP31" in column (11).

UN 1428 Insert "TP31" in column (11).

UN 1556 Insert "T14" in column (10) and insert "TP2", "TP9", "TP13" and "TP27" in column (11) for PG I.

Insert "T11" in column (10) and insert "TP2", "TP13" and "TP27" in column (11) for PG II.

Insert "T7" in column (10) and insert "TP2" and "TP28" in column (11) for PG III.

UN 1581 Amend the name in column (2) to read as follows:

"CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin"

UN 2030 Amend to read as follows:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2030	HYDRAZINE HYDRATE, or HYDRAZINE AQUEOUS SOLUTION, with not less than 37% hydrazine, by mass	8	6.1	I	298	NONE			T20	TP2 TP13
		8	6.1	II		500 ml			T15	TP2 TP13
		8	6.1	III		1 L			T4	TP2

UN 2216 Insert special provision "300" in column (6).

UN 2257 Insert "TP31" in column (11).

UN 2531 Insert "TP30" in column (11).

UN 2579 Insert "TP30" in column (11).

UN 2680 Amend the name in column (2) to read as follows:

"LITHIUM HYDROXIDE"

UN 2740 Insert "T20" in column (10) and insert "TP2" and "TP13" in column (11).

UN 3166 Amend the name in column (29 to read as follows:

"ENGINE, INTERNAL COMBUSTION or VEHICLE FLAMMABLE GAS, POWERED or VEHICLE FLAMMABLE LIQUID, POWERED"

UN 3221 Replace "NONE" with "25 ml" in column (7).

UN 3222 Replace "NONE" with "100 g" in column (7).

UN 3223 Replace "NONE" with "25 ml" in column (7).

UN 3224 Replace "NONE" with "100 g" in column (7).

UN 3225 Replace "NONE" with "125 ml" in column (7).

UN 3226 Replace "NONE" with "500 g" in column (7).

UN 3227 Replace "NONE" with "125 ml" in column (7).

UN 3228 Replace "NONE" with "500 g" in column (7).

UN 3229 Replace "NONE" with "125 ml" in column (7).

UN 3230 Replace "NONE" with "500 g" in column (7).

UN 3270 Replace "NONE" with "500 g" in column (7).

2 Add the following new entries:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1372	FIBRES, ANIMAL or FIBRES, VEGETABLE burnt, wet or damp	4.2		III	117	NONE	P410			
1387	WOOL WASTE, WET	4.2		III	117	NONE	P410			
1856	RAGS, OILY	4.2			29 117	NONE	P003 IBC08	PP19 B6		
1857	TEXTILE WASTE, WET	4.2		III	117	NONE	P410			
3359	CARGO TRANSPORT UNIT UNDER FUMIGATION	9			29 [XXX]	NONE	NONE			
3360	FIBRES, VEGETABLE, DRY	4.1			29 117 299	NONE	P003	PP19		
3361	CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.	6.1	8	II	109	NONE	P001 IBC01		T11	TP2 TP13
3362	CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.	6.1	3, 8	II	109	NONE	P001 IBC01		T11	TP2 TP13
3363	DANGEROUS GOODS IN MACHINERY or DANGEROUS GOODS IN APPARATUS	9			301	NONE	P907			

Chapter 3.3

Section 3.3.1

Special provisions

SP 109 Delete.

SP 117 Delete the two last sentences [replaced by SP 300 for UN 2216].

SP 119 Add "and refrigerating machine components" after "Refrigerating machines" in the second sentence.

SP 162 Replace "23 °C with "60.5 °C".

SP 190 Delete the first sentence.

SP 191 Replace "see Special Provision 190" with "Receptacles with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to these Regulations."

SP 196 Amend to read as follows:

"196 Formulations which in laboratory testing neither detonate in the cavitated state or deflagrate, which show no effect when heated under confinement and which exhibit no explosive power may be transported under this entry. The formulation must also be thermally stable (i.e. the SADT is 60 °C or higher for a 50 kg package). Formulations not meeting these criteria shall be transported under the provisions of Division 5.2, see 2.5.3.2.4."

SP 235 Delete the last sentence.

SP 265 Delete.

SP 268 Delete.

SP 291 Add "and refrigerating machine components" after "Refrigerating machines" in the fourth sentence.

SP 298 Add the following new special provision:

"298 Solutions with a flash point of 60.5 °C or less shall bear a flammable liquid label."

SP 299 Add the following new special provision:

"299 Consignments of COTTON, DRY having a density not less than 360 kg/m³ according to ISO 8115:1986 are not subject to these Regulations when carried in closed transport units."

SP 300 Add the following new special provision:

"300 Fish meal or fish scrap shall not be transported if the temperature at the time of loading exceeds 35 °C or 5 °C above the ambient temperature whichever is higher. Fish scrap or fish meal shall contain at least 100 ppm of anti-oxidant (ethoxyquin) at the time of consignment."

SP 301 Add the following new special provision:

"301 This entry only applies to machinery or apparatus containing dangerous substances as a residue or an integral element of the machinery or apparatus. It shall not be used for machinery or apparatus for which a proper shipping name already exists in the Dangerous Goods List. Machinery and apparatus transported under this entry shall only contain dangerous goods which are authorized to be transported in accordance with the provisions in Chapter 3.4 (Limited quantities). The quantity of dangerous goods in machinery or apparatus shall not exceed the quantity specified in column 7 of the Dangerous Goods List for each item of dangerous goods contained. If the machinery or apparatus contains more than one item of dangerous goods, the individual substances shall not be capable of reacting dangerously with one another (see 4.1.1.6). When it is required to ensure liquid dangerous goods remain in their intended orientation, package orientation labels meeting the specifications of ISO 780:1985 shall be affixed on at least two opposite vertical sides with the arrows pointing in the correct direction. The competent authority may exempt from regulation machinery or apparatus which would otherwise be transported under this entry."

Chapter 4.1

Introductory Note 1 Delete.

Introductory Note 2 Delete.

4.1.1.15 Add the following new paragraph:

"4.1.1.15 Explosives, self-reactive substances and organic peroxides

Unless specific provision to the contrary is made in these Regulations, the packagings, including IBCs and large packagings, used for goods of Class 1, self-reactive substances of Division 4.1 and organic peroxides of Division 5.2 shall comply with the provisions for the medium danger group (Packing group II)."
Renumber following paragraph and sub-paragraphs accordingly.

4.1.4.1 Add "1856" and "3360" in PP19 under the heading "special packing provisions" for packing instruction P003.

Add "plywood (1D)" in column "outer packaging" under "Drums" for the following packing instructions:

P112 (a), P112(b), P112(c), P113, P116, P130, P131, P134, P135, P136, P138, P140, P141 and P142.

Add "plastics, removable head (1H2)" in column "outer packaging" under "Drums" for the following packing instructions:

P112(c), P113, P115, P134, P138 and P140.

Add "fibreboard (1G)" in column "outer packaging" under "Drums" for the following packing instructions :

P134 and P138.

Add "steel, removable head (1A2)", "aluminium, removable head (1B2)" and "plastics, removable head (1H2)" in column "outer packaging" under "Drums" for packing instruction P144.

Add "aluminium (4B)" in column "outer packaging" under "Boxes" for packing instuctions P112 (c) and P113.

Add "plastics, solid (4H2)" in column "outer packaging" under "Boxes" for packing instruction P144.

Add the following new packing instruction:

"

P907	PACKING INSTRUCTION	P907

If the machinery or apparatus is constructed and designed so that the receptacles containing the dangerous goods are afforded adequate protection, an outer packaging is not required. Dangerous goods in machinery or apparatus shall otherwise be packed in outer packagings constructed of suitable material of adequate strength and design in relation to the packaging capacity and its intended use, and meeting the applicable requirements of 4.1.1.1.

Receptacles containing dangerous goods shall conform to the general provisions in 4.1.1, except that 4.1.1.3, 4.1.1.4, 4.1.1.12 and 4.1.1.14 do not apply. For Division 2.2 gases, the inner cylinder or receptacle, its contents and filling density shall be to the satisfaction of the competent authority of the country in which the cylinder or receptacle is filled.

In addition, the manner in which receptacles are contained within the machinery or apparatus, shall be such that under normal conditions of transport, damage to receptacles containing the dangerous goods is unlikely; and in the event of damage to receptacles containing solid or liquid dangerous goods, no leakage of the dangerous goods from the machinery or apparatus is possible (a leakproof liner may be used to satisfy this requirement). Receptacles containing dangerous goods shall be so installed, secured or cushioned as to prevent their breakage or leakage and so as to control their movement within the machinery or apparatus during normal conditions of transport. Cushioning material shall not react dangerously with the content of the receptacles. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material.

"

Chapter 4.2

4.2.4.3 Add new portable tank special provisions "TP30" and "TP31" to read as follows:

"TP30 This substance shall be transported in insulated tanks.
TP31 This substance may only be transported in tanks in the solid state."

Chapter 5.4

5.4.1.1.3 Amend the end of this paragraph to read as follows:

"... preceded by the word "WASTE" unless this is already part of the proper shipping name."

5.4.2.1 (f) Replace the reference "7.1.3.2.1" with "7.1.3.3.1".

5.4.3.2 Replace the reference "7.1.3.2.1 (b)" with "7.1.3.3.1 (b)".

Chapter 6.1

Introductory Note 1 Delete.

Introductory Note 2 Delete.

Introductory Note 3 Delete.

6.1.1.4 Add "reconditioned", after "manufactured" and delete "manufactured" after "each".

6.1.2.3 Delete "and infectious substances packagings marked in accordance with 6.3.1.1,".

6.1.3 Under Note 3, replace three times "Group" with "Packing Group".

6.1.3.2 Amend to read as follows:

"6.1.3.3 Every packaging other than those referred in paragraph 6.1.3.2 liable to undergo a reconditioning process shall bear the marks indicated in 6.1.3.1 (a) to (e) in a permanent form. Marks are permanent if they are able to withstand the reconditioning process (e.g. embossed). For packagings other than metal drums of a capacity greater than 100 litres, these permanent marks may replace the corresponding durable markings prescribed in 6.1.3.1."

6.1.3.2.1, 6.1.3.2.2 and 6.1.3.2.3 Renumber these paragraphs as 6.1.3.2, 6.1.3.4 and 6.1.3.5 respectively.

Renumber the following paragraphs accordingly.

6.1.3.3 Amend this paragraph to read as follows:

"6.1.3.3 Marking shall be applied in the sequence of the sub-paragraphs in 6.1.3.1; each element of the marking required in these sub-paragraphs and when appropriate sub-paragraphs (h) to (j) of 6.1.3.4 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable.

For examples, see 6.1.3.6.

Any additional markings authorized by a competent authority shall still enable the parts of the mark to be correctly identified with reference to 6.1.3.1."

6.1.3.4 (ii) Amend to read as follows:

"(ii) the name of the reconditioner or other identification of the packaging specified by the competent authority."

6.1.4.8.2 Replace “is” with “may not exceed” in the second line of this paragraph.

6.1.5.2.5 Amend last sentence to read as follows:

"The minimum height of the stack including the test sample shall be 3 metres."

6.1.5.6.2 Delete "non-dangerous" after "are" in the first sentence.

Chapter 6.3

6.3.1.1 Replace "may, after decision by the competent authority," with "shall" and add the following sentence, at the end:

"Each element of the marking applied in accordance with sub-paragraphs (a) to (g) shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable "

Chapter 6.5

6.5.2.1.1 At the end, add the following sentence:

"Each element of the marking applied in accordance with sub-paragraphs (a) to (h) and with 6.5.2.2 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable."

6.5.3.3.6 Delete.

6.5.3.4.10 Delete and renumber the following paragraphs.

Chapter 6.6

6.6.1.3 Add the following new paragraph:

"6.6.1.3 The requirements for large packagings in 6.6.4 are based on large packagings currently used. In order to take into account progress in science and technology, there is no objection to the use of large packagings having specifications different from those in 6.6.4 provided they are equally effective, acceptable to the competent authority and able successfully to withstand the tests described in 6.6.5. Methods of testing other than those described in these Regulations are acceptable provided they are equivalent."

6.6.2.1 Add the following new paragraph:

"6.6.2.1 The letter "W" may follow the Large Packaging code. The letter "W" signifies that the large packaging, although of the same type indicated by the code, is manufactured to a specification different from those in section 6.6.4 and is considered equivalent in accordance with the requirements in 6.6.1.3."

6.6.3.1 At the end, add the following sentence:

"Each element of the marking applied in accordance with sub-paragraphs (a) to (h) shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable."

Chapter 7.1

7.1.2.1 Add "... and 7.1.3.2" at the end of the last sentence.

7.1.3.2 Add the following new section:

"**7.1.3.2** ***Mixed carriage of goods of Class 1 with dangerous goods of other classes in freight containers, vehicles and wagons***

7.1.3.2.1 Except where otherwise specially provided for in these Regulations, goods of Class 1 shall not be transported together in freight containers, vehicles and wagons with dangerous goods of other classes.

7.1.3.2.2 Goods in Division 1.4S may be transported together with dangerous goods of other classes.

7.1.3.2.3 Blasting explosives (except EXPLOSIVE, BLASTING, TYPE C, UN No. 0083) may be transported together with ammonium nitrate and inorganic nitrates of Class 5.1 */ provided the aggregate is treated as blasting explosives under Class 1 for the purpose of placarding, segregation, stowage and maximum permissible load.

7.1.3.2.4 Life saving appliances (UN 3072 and UN 2990) containing Class 1 goods as equipment may be transported together with the same dangerous goods as contained in the appliances.

7.1.3.2.5 Air bag inflators, pyrotechnic or air bag modules, pyrotechnic or seat-belt pretensioners, pyrotechnic of Division 1.4G may be transported with air bag inflators or air bag modules or seat-belt pretensioners of Classes 2 or 9."

Renumber the following paragraphs.

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*/ *Reference to UN numbers will be added when the revision of entries for ammonium nitrate fertilizers has been completed.*

Appendix A and Index

1. Amend as appropriate Appendix A and the alphabetical index in accordance with the amendments adopted for Chapter 3.2.

2. Add the following entry in the alphabetical index:

"Battery, lithium, see	9	3090
	9	3091"